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EXAMINER	
PIZIALI, JEFFREY J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/658,295	YOSHIDA, DAISUKE	
	Examiner	Art Unit	
	JEFF PIZIALI	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2009 and 13 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-15* is/are pending in the application.

4a) Of the above claim(s) *9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8 and 10-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/505,194.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on *29 September 2009* has been entered.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent ***Application No. 09/505,194*** (*now* ***Patent No. 6,670,938***), filed on ***16 February 2000***.

Drawings

3. The drawings were received on *29 September 2009*. These drawings are acceptable.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character not mentioned in the description: "***vertical signal lines 7***" (*e.g., see line 3 of the replacement paragraph bridging pages 14 and 15*).

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR

1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the figures.

Specification

6. The amendment filed *29 September 2009* is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention.

The added material which is not supported by the original disclosure is as follows:

"At this time, the memory circuits 3, controlled by clock signals (MEMO_CLK), for memorizing respective offset correction data (e.g., of 5 bits) are reset to a prescribed level (e.g., 5 bit data of (10000) as a default)" (*see line 5 of the replacement paragraph bridging pages 13 and 14*)

Applicant is required to cancel the new matter in the reply to this Office Action.

7. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Election/Restrictions

8. Applicant's election of ***Species 1 (claims 8 and 10-15)*** in the reply filed on *13 November 2008* is acknowledged and appreciated.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

9. ***Claim 9 is withdrawn*** from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on *13 November 2008*.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. *Claims 8 and 10-15* are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 8 recites the limitation "***drive means***" (*line 8*). There is insufficient antecedent basis for this limitation in the claim.

The lack of a grammatical article (such as "***a***" or "***a plurality of***" or "***the***" or "***said***") preceding the limitation renders it unclear whether the claim is establishing a new element; or instead referring back to some preestablished limitation.

For example, it would be unclear to one having ordinary skill in the art whether a single "***drive means***" is being claimed; or rather whether a plurality of "***drive means***" are being claimed.

13. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "***a plurality of signal lines***" (*line 3*); "***a first common signal line***" (*line 10*); "***a second common signal line***" (*line 12*); and "***one signal line***" (*line 14*).

It would be unclear to one having ordinary skill in the art whether the "***one signal line***" limitation is intended to be identical to, common to, or distinct from the earlier recited "***a plurality of signal lines***" (*line 3*); "***a first common signal line***" (*line 10*); and/or "***a second common signal line***" (*line 12*).

14. Claim 8 recites the limitation "***column inversion drive means***" (*line 21*). There is insufficient antecedent basis for this limitation in the claim.

The lack of a grammatical article (such as "***a***" or "***a plurality of***" or "***the***" or "***said***") preceding the limitation renders it unclear whether the claim is establishing a new element; or instead referring back to some preestablished limitation.

For example, it would be unclear to one having ordinary skill in the art whether a single "***drive means***" is being claimed; or rather whether a plurality of "***drive means***" are being claimed.

15. Claims 10-15 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "***a liquid crystal apparatus***" (*claim 8, line 1*) and "***a liquid crystal apparatus***" (*claims 10-15, line 1*).

It would be unclear to one having ordinary skill in the art whether the "***liquid crystal apparatus***" limitations are intended to be identical to, or distinct from, one another.

16. Claim 10 recites the limitation "***conductivity type***" (*in lines 2-3*). The addition of the word "***type***" to an otherwise definite expression extends the scope of the expression so as to render it indefinite. Ex parte Copenhaver, 109 USPQ 118 (Bd. App. 1955). It would be unclear to one having ordinary skill in the art what "***type***" is intended to convey. See MPEP 2173.05(b).

17. Claim 11 recites the limitation "***picture signal-supplying means***" (*line 2*). There is insufficient antecedent basis for this limitation in the claim.

The lack of a grammatical article (such as "***a***" or "***a plurality of***" or "***the***" or "***said***") preceding the limitation renders it unclear whether the claim is establishing a new element; or instead referring back to some preestablished limitation.

For example, it would be unclear to one having ordinary skill in the art whether a single "***drive means***" is being claimed; or rather whether a plurality of "***means***" are being claimed.

18. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "***positive and negative polarity picture signals***" (*claim 8, line 5*) and "***positive polarity picture signals***" (*claim 11, line 3*).

It would be unclear to one having ordinary skill in the art whether the "***positive polarity picture signals***" limitations are intended to be identical to, or distinct from, one another.

19. Claim 11 recites the limitation "***second picture signal-generating means***" (*line 5*). There is insufficient antecedent basis for this limitation in the claim.

The lack of a grammatical article (such as "***a***" or "***a plurality of***" or "***the***" or "***said***") preceding the limitation renders it unclear whether the claim is establishing a new element; or instead referring back to some preestablished limitation.

For example, it would be unclear to one having ordinary skill in the art whether a single "***means***" is being claimed; or rather whether a plurality of "***means***" are being claimed.

20. Claim 11 recites the limitation "***the first picture signal generating means***" (*line 6*). There is insufficient antecedent basis for this limitation in the claim.

21. Claim 11 recites the limitation "***the positive polarity picture signals***" (*line 7*). There is insufficient antecedent basis for this limitation in the claim.

22. Claim 11 recites the limitation "***first supply voltage***" (*line 11*). There is insufficient antecedent basis for this limitation in the claim.

The lack of a grammatical article (such as "***a***" or "***a plurality of***" or "***the***" or "***said***") preceding the limitation renders it unclear whether the claim is establishing a new element; or instead referring back to some preestablished limitation.

23. Claim 11 recites the limitation "***the second first picture signal-generating means***" (*line 12*). There is insufficient antecedent basis for this limitation in the claim.

24. Claim 11 recites the limitation "***the second supply voltage***" (*line 12*). There is insufficient antecedent basis for this limitation in the claim.

25. Claim 11 recites the limitation "***the first supply voltages***" (*line 13*). There is insufficient antecedent basis for this limitation in the claim.

26. Claim 11 recites the limitation "***the highest voltage + α***" (*line 13*). There is insufficient antecedent basis for this limitation in the claim.

27. Claim 11 recites the limitation "***the central voltage - α***" (*line 14*). There is insufficient antecedent basis for this limitation in the claim.

28. Claim 11 recites the limitation "***the second supply voltages***" (*line 14*). There is insufficient antecedent basis for this limitation in the claim.

29. Claim 11 recites the limitation "***the central voltage + α***" (*line 15*). There is insufficient antecedent basis for this limitation in the claim.

30. Claim 11 recites the limitation "***the lowest voltage - α***" (*line 15*). There is insufficient antecedent basis for this limitation in the claim.

31. Claim 11 recites the limitation "***α***" (*line 15*). There is insufficient antecedent basis for this limitation in the claim.

32. Claim 11 recites the limitation "***α voltage lowering margin***" (*line 16*). There is insufficient antecedent basis for this limitation in the claim.

33. Claim 11 recites the limitation "***the picture signal-generating means***" (*line 16*). There is insufficient antecedent basis for this limitation in the claim.

34. Claim 12 recites the limitation "***the range***" (*line 2*). There is insufficient antecedent basis for this limitation in the claim.

35. Claim 12 recites the limitation "***picture signal-supplying means***" (*line 2*). There is insufficient antecedent basis for this limitation in the claim.

The lack of a grammatical article (such as "***a***" or "***a plurality of***" or "***the***" or "***said***") preceding the limitation renders it unclear whether the claim is establishing a new element; or instead referring back to some preestablished limitation (*e.g., **"picture signal-supplying means"** in claim 11, line 2*).

For example, it would be unclear to one having ordinary skill in the art whether a single "***drive means***" is being claimed; or rather whether a plurality of "***means***" are being claimed.

36. The claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

As a courtesy to the Applicant, the examiner has attempted to also make rejections over prior art -- based on the examiner's best guess interpretations of the invention that the Applicant is intending to claim.

However, the indefinite nature of the claimed subject matter naturally hinders the Office's ability to search and examine the application.

Any instantly distinguishing features and subject matter that the Applicant considers to be absent from the cited prior art is more than likely a result of the indefinite nature of the claims.

The Applicant is respectfully requested to correct the indefinite nature of the claims, which should going forward result in a more precise search and examination.

Claim Rejections - 35 USC § 102

37. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

38. *Claims 8 and 10-15* are rejected under 35 U.S.C. 102(e) as being anticipated by ***Hiroki (US 6,628,253 B1)***.

Regarding claim 8, ***Hiroki*** discloses a liquid crystal apparatus, comprising:

a liquid crystal device [*e.g., Fig. 7; 1*] comprising

an active matrix substrate (*see Fig. 8; Column 1, Lines 8-15*) having thereon

a plurality of signal lines [*e.g., Fig. 8A; Signal Lines*] arranged in columns,

a plurality of scanning lines [*e.g., Fig. 7; Scan Lines*] arranged in rows, and

pixel electrodes [*e.g., Fig. 8A; A, B, C*] each connected via a pixel switch [*e.g., Fig. 8A; thin film transistors*] to an intersection of the signal lines and the scanning lines so as to supply positive and negative polarity picture signals [*e.g., Fig. 8A; Analog Video Signals*] to the pixel electrodes via the signal lines,

a counter substrate disposed opposite to the active matrix substrate, and

a liquid crystal disposed between the active matrix substrate and the counter substrate (*see the entire document, including 6, Line 63 - Column 7, Line 6*), and

drive means [*e.g., Fig. 7; 5*] for driving the liquid crystal device, wherein said drive means includes:

a first common signal line [*e.g., Fig. 8A; horizontal signal line segment output from 27*] for supplying the positive polarity picture signals to each of the plurality of signal lines (*see Figs. 10-12; Column 3, Line 4 -Column 4, Line 65*),

a second common signal line [*e.g., Fig. 8A; the vertical signal line segments between the transfer switches and the horizontal signal line segment output from 27*] for supplying the negative polarity picture signals to each of the plurality of signal lines (*wherein **Hiroki** teaches reversing picture signal polarity between pixels, columns, rows, and/or frames*),

a first transfer switch [*e.g., Fig. 8A; positive-signal controlled leftmost CMOS circuit within the 'Sampling Circuit and Buffer Circuit'*] for connecting (*electrically*) one signal line

[*e.g., Fig. 8A; Signal Line(1)*] with the first common signal line for selectively supplying the positive polarity picture signals to the one signal line, and

a second transfer switch [*e.g., Fig. 8A; negative-signal controlled leftmost CMOS circuit within the 'Sampling Circuit and Buffer Circuit'*] for connecting (*electrically*) the one signal line with the second common signal line for selectively supplying the negative polarity picture signals to the one signal line, wherein

the one signal line is connected to the first transfer switch and the second transfer switch (*see Fig. 8A*), and

column inversion drive means [*e.g., Figs. 11A, 11B, 11C*] for:

in a first frame [*e.g., Fig. 10; '1 Frame'*], selectively turning on the first transfer switch for the one signal line, and

in a second frame [*e.g., Fig. 10; 'Next Frame'*], selectively turning on the second transfer switch for the one signal line (*see the entire document, including 3, Line 4 -Column 4, Line 65*).

Regarding claim 10, ***Hiroki*** discloses the first transfer switch comprises a first transistor of a first conductivity type and

the second transfer switch comprises a second transistor of a second conductivity type different from the first conductivity type (*see Fig. 8A; Column 3, Lines 4-46 -- in particular, see the CMOS circuitry within the 'Sampling Circuit and Buffer Circuit'*).

Regarding claim 11, ***Hiroki*** discloses picture signal-supplying means including

a first picture signal-generating means [*e.g., Fig. 10; 22*] for generating positive polarity picture signals [*e.g., Fig. 10; Positive Analog Video Signal 27*] supplied to the first common signal line and

second picture signal-generating means [*e.g., Fig. 10; 22*] for generating the negative polarity picture signals [*e.g., Fig. 10; Negative Analog Video Signal 27*] supplied to the second common signal line, wherein

the first picture signal generating means generates the positive polarity picture signals in a range between a highest voltage and a central voltage supplied to the pixel electrodes (*see Fig. 10*);

the second picture signal-generating means generates the negative polarity picture signals in a range between the central voltage and a lowest voltage supplied to the pixel electrodes (*see Fig. 10*);

the first picture signal-generating means is operated at first supply voltage (*see Fig. 10*) and

the second first picture signal-generating means is operated at the second supply voltage different from the first supply voltage (*see Fig. 10*);

the first supply voltages are set to be the highest voltage + α and

the central voltage - α; and

the second supply voltages are set to be the central voltage + α and

the lowest voltage - α, wherein

α denotes α voltage lowering margin due to an internal resistance in the picture signal-generating means (*see the entire document, including 3, Line 4 -Column 4, Line 65*).

Regarding claim 12, ***Hiroki*** discloses α is in the range of 0 volt to 1 volt (*see Fig. 12; Column 3, Line 4 -Column 4, Line 65*).

Regarding claim 13, ***Hiroki*** discloses the first and second transfer switches and picture signal-supplying means are disposed on the active matrix substrate (*see Fig. 7; Column 1, Line 14 - Column 3, Line 3*).

Regarding claim 14, ***Hiroki*** discloses the active matrix substrate comprises an insulating substrate (*see the entire document, including 8, Lines 25-41*).

Regarding claim 15, ***Hiroki*** discloses the active matrix substrate comprises a single crystal substrate (*see the entire document, including 8, Lines 25-41*).

39. *Claims 8 and 10-15* are rejected under 35 U.S.C. 102(b) as being anticipated by ***Takahara et al (US 5,436,635 A)***.

Regarding claim 8, ***Takahara*** discloses a liquid crystal apparatus (*see the Abstract*), comprising:

a liquid crystal device (*see the entire document, including 1, Lines 5-16*) comprising an active matrix (*see claim 3*) substrate [*e.g., Fig. 13; 31*] having thereon

a plurality of signal lines [*e.g., Fig. 11; S*] arranged in columns,

a plurality of scanning lines [*e.g., Fig. 11; G*] arranged in rows, and

pixel electrodes [*e.g., Fig. 11; p*] each connected via a pixel switch [*e.g., Fig. 11; T*] to an intersection of the signal lines and the scanning lines so as to supply positive and negative polarity picture signals [*e.g., Fig. 11; V*] to the pixel electrodes via the signal lines,

a counter substrate [*e.g., Fig. 13; 32*] disposed opposite to the active matrix substrate, and

a liquid crystal [*e.g., Fig. 13; 37*] disposed between the active matrix substrate and the counter substrate (*see the entire document, including 9, Line 11 - Column 10, Line 21*), and

drive means [*e.g., Fig. 11; 11, 12, 71*] for driving the liquid crystal device, wherein said drive means includes:

a first common signal line [*e.g., Fig. 11; V(P)*] for supplying the positive polarity picture signals [*e.g., Fig. 11; V+*] to each of the plurality of signal lines,

a second common signal line [*e.g., Fig. 11; V(M)*] for supplying the negative polarity picture signals [*e.g., Fig. 11; V-*] to each of the plurality of signal lines (*see the entire document, including 21, Lines 3-56*),

a first transfer switch [*e.g., Fig. 11;* SW_{p1}] for connecting one signal line [*e.g., Fig. 11; S1*] with the first common signal line for selectively supplying the positive polarity picture signals to the one signal line, and

a second transfer switch [*e.g., Fig. 11;* SW_{m1}] for connecting the one signal line with the second common signal line for selectively supplying the negative polarity picture signals to the one signal line, wherein

the one signal line is connected to the first transfer switch and the second transfer switch (*see Fig. 11*), and

column inversion drive means [*e.g., Fig. 11; a, 123, b*] for:

in a first frame, selectively turning on the first transfer switch for the one signal line, and

in a second frame, selectively turning on the second transfer switch for the one signal line (*see Figs. 11 & 12; Column 20, Line 24 - Column 21, Line 56*).

Regarding claim 10, ***Takahara*** discloses the first transfer switch comprises a first transistor (*see the entire document, including 6, Lines 52-65*) of a first conductivity type and

the second transfer switch comprises a second transistor of a second conductivity type different from the first conductivity type (*see the entire document, including 21, Lines 5-56*).

Regarding claim 11, ***Takahara*** discloses picture signal-supplying means including

a first picture signal-generating means [*e.g., Fig. 11; V(P)*] for generating positive polarity picture signals [*e.g., Fig. 11; V+*] supplied to the first common signal line and

second picture signal-generating means [*e.g., Fig. 11; V(M)*] for generating the negative polarity picture signals [*e.g., Fig. 11; V-*] supplied to the second common signal line, wherein

the first picture signal generating means generates the positive polarity picture signals in a range between a highest voltage and a central voltage supplied to the pixel electrodes;

the second picture signal-generating means generates the negative polarity picture signals in a range between the central voltage and a lowest voltage supplied to the pixel electrodes;

the first picture signal-generating means is operated at first supply voltage and

the second first picture signal-generating means is operated at the second supply voltage different from the first supply voltage;

the first supply voltages are set to be the highest voltage + α and

the central voltage - α; and

the second supply voltages are set to be the central voltage + α and

the lowest voltage - α, wherein

α denotes α voltage lowering margin due to an internal resistance in the picture signal-generating means (*see Figs. 11 & 12; Column 20, Line 24 - Column 21, Line 56*).

Regarding claim 12, ***Takahara*** discloses α is in the range of 0 volt to 1 volt (*see Figs. 11 & 12; Column 20, Line 24 - Column 21, Line 56*).

Regarding claim 13, ***Takahara*** discloses the first and second transfer switches and picture signal-supplying means are disposed on the active matrix substrate (*see Figs. 11 & 12; Column 20, Line 24 - Column 21, Line 56 and Column 13, Lines 20-35*).

Regarding claim 14, ***Takahara*** discloses the active matrix substrate comprises an insulating substrate (*see the entire document, including 8, Lines 25-41 and Column 13, Lines 20-35*).

Regarding claim 15, ***Takahara*** discloses the active matrix substrate comprises a single crystal substrate (*see the entire document, including 9, Line 10 - Column 13, Line 65*).

Claim Rejections - 35 USC § 103

40. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

41. *Claims 10, 13, and 15* are further rejected under 35 U.S.C. 103(a) as being unpatentable over ***Takahara et al (US 5,436,635 A)***.

Regarding claim 10, ***Takahara*** discloses the first transfer switch comprises a first transistor (*see the entire document, including 6, Lines 52-65*) of a first conductivity type and

the second transfer switch comprises a second transistor of a second conductivity type different from the first conductivity type (*see the entire document, including 21, Lines 5-56*).

Should it is shown that ***Takahara*** neglects to teach such transistor subject matter with sufficient specificity, the examiner takes official notice that it would have been well within the skill of an artisan at the time of invention to use transistors of different conductivity types to form ***Takahara's*** transfer switches, so as to make use of commonly available and readily understood types of electrical switches.

Regarding claim 13, ***Takahara*** discloses the first and second transfer switches and picture signal-supplying means are disposed on the active matrix substrate (*see Figs. 11 & 12; Column 20, Line 24 - Column 21, Line 56 and Column 13, Lines 20-35*).

Should it is shown that ***Takahara*** neglects to teach such common substrate subject matter with sufficient specificity, the examiner takes official notice that it would have been well within the skill of an artisan at the time of invention to dispose ***Takahara's*** first and second transfer switches and the picture signal supply means on a common substrate with the active matrix substrate, so as to make use of commonly available and readily understood types circuitry manufacturing techniques.

Regarding claim 15, ***Takahara*** discloses the active matrix substrate comprises a single crystal substrate (*see the entire document, including 9, Line 10 - Column 13, Line 65*).

Should it is shown that ***Takahara*** neglects to teach such single crystal subject matter with sufficient specificity, the examiner takes official notice that it would have been well within the skill of an artisan at the time of invention to use a single crystal substrate as ***Takahara's*** active matrix substrate, so as to make use of a commonly available and readily understood type of substrate.

Response to Arguments

42. Applicant's arguments filed on *29 September 2009* have been fully considered but they are not persuasive.

The Applicant contends, "***Hiroki*** *does not disclose 'a first transfer switch for connecting one signal line of the plurality of the signal lines with the first common signal line for selectively supplying the positive polarity picture signals to the one signal line, and a second transfer switch*

for connecting the one signal line with the second common signal line for selectively supplying the negative polarity picture signals to the one signal line, wherein the one signal line is connected to the first transfer switch.' " (see Pages 12-13 of the Response filed on *29 September 2009*). However, the examiner respectfully disagrees.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "*a first transfer switch for connecting one signal line of the plurality of the signal lines with the first common signal line for selectively supplying the positive polarity picture signals to the one signal line, and a second transfer switch for connecting the one signal line with the second common signal line for selectively supplying the negative polarity picture signals to the one signal line, wherein the one signal line is connected to the first transfer switch*") are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Hiroki discloses a first transfer switch [*e.g., Fig. 8A; positive-signal controlled leftmost CMOS circuit within the 'Sampling Circuit and Buffer Circuit'*] for connecting (*electrically*) one signal line [*e.g., Fig. 8A; Signal Line(1)*] with the first common signal line [*e.g., Fig. 8A; horizontal signal line segment output from 27*] for selectively supplying the positive polarity picture signals [*e.g., Fig. 8A; positive Analog Video Signals*] to the one signal line, and

a second transfer switch [*e.g., Fig. 8A; negative-signal controlled leftmost CMOS circuit within the 'Sampling Circuit and Buffer Circuit'*] for connecting (*electrically*) the one signal line with the second common signal line [*e.g., Fig. 8A; the vertical signal line segments between the transfer switches and the horizontal signal line segment output from 27*] for selectively supplying the negative polarity picture signals [*e.g., Fig. 8A; negative Analog Video Signals*] to the one signal line, wherein

the one signal line is connected to the first transfer switch and the second transfer switch (*see Fig. 8A*), and

column inversion drive means [*e.g., Figs. 11A, 11B, 11C*] for:

in a first frame [*e.g., Fig. 10; '1 Frame'*], selectively turning on the first transfer switch for the one signal line, and

in a second frame [*e.g., Fig. 10; 'Next Frame'*], selectively turning on the second transfer switch for the one signal line (*see the entire document, including 3, Line 4 -Column 4, Line 65*).

Applicant's arguments with respect to *claims 8 and 10-15* have been considered but are moot in view of the new ground(s) of rejection.

By such reasoning, rejection of the claims is deemed necessary, proper, and thereby maintained at this time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571)272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Jeff Piziali/
Primary Examiner, Art Unit 2629
16 January 2010